states were determined on the basis of published literature. For next generation AVDs, which are currently tested in clinical trials, various possible effect and pricing scenarios have been simulated. **RESULTS:** Applying the base case settings resulted in incremental costs of €107,925, in 2.03 incremental quality-adjusted life years (QALYs) and in a cost-effectiveness ratio of €53,165 per QALY gained. Probabilistic and deterministic sensitivity analyses as well as scenario analyses for the effect size and the AVD costs were performed in order to investigate the robustness of results. In these analyses a strong variation of the cost-effectiveness results was obtained ranging from €23,512 (best case) to €176,958 (worst case) per QALY gained. **CONCLUSIONS:** The innovative nature, the high unmet medical need and the expected unprecedented efficacy of next generation AVDs will highly likely lead to the case that even relatively high incremental cost effectiveness ratios, that have been obtained when simulating various effect and pricing scenarios, will be regarded as acceptable from a German health care payer perspective.

PSS36

IMPLICATIONS FOR TIME SAVINGS USING NEW INTRAOPERATIVE MEASURING TECHNOLOGY

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OBJECTIVES: Intraoperative threshold measurement is a part of the cochlear implantation procedure and in the current setting conducted by the clinicians with a standard set-up. The newly released CR220 Intraoperative Remote Assistant is a handheld device and can also be used by someone already in the operating theatre (OT). The aim of this study was to compare measurement time with the new CR220 and standard set-up and to investigate from the clinic's perspective any cost-savings created as a result of time-savings with the new device. **METHODS:** Stages of the measurement process are identified and the time is measured for each stage during 113 patients' implantation procedure. A literature review was conducted to identify the reimbursement level of this process in order to translate any time-savings to cost savings. **RESULTS:** When the clinician travels to the OT, the mean time spent per procedure with CR220 is 8.4% less than the computer set-up (163.7 minutes vs 149.9 minutes). If the measurement is conducted by someone already in the OR, the measurement time is reduced by 95.5% with the CR220 (163.7 minutes vs 7.3 min). Literature review revealed that the fee for measurement as $18.99-22.57 per 15 minutes in the US setting and in most of the other settings this procedure is not reimbursed separately but covered under cochlear implantation. **CONCLUSIONS:** The analysis showed that considerable time is spent for the clinician to travel to OT and waiting in the OT. This "unproductive" time is not only wasteful, but also means the clinician is not available in the clinic seeing patients where their expert skills are of most value. Moreover the clinic is either underpaid or is not paid at all for this expertise and time demanding process. The new CR220 gives clinics the opportunity to allocate their limited resources efficiently.

SENSORY SYSTEMS DISORDERS – Patient-Reported Outcomes & Patient Preference Studies

PSS37

DRUG SURVIVAL RATES AND COST OF BIOLOGICAL AGENTS FOR THE TREATMENT OF MODERATE TO SEVERE PSORIASIS IN THE BALEARIC ISLANDS (SPAIN)

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OBJECTIVES: There are few studies combining dose regimen in routine clinical practice, drug survival rates and costs of biological agents for the treatment of naïve patients with moderate-to-severe psoriasis in the clinical practice. To assess the dose regimen in routine clinical practice, drug survival rate (persistence rate) and efficiency (cost per persistence) for etanercept (ETN), adalimumab (ADA) and ustekinumab (UST) in a real practice clinical setting. **METHODS:** A retrospective study on psoriasis patients aged ≥18 years, naïve to a biological agent and a minimum of 6 months of treatment was performed in 5 public health system hospitals in the Balearic Islands (Spain) for the period from January 1st 2010 to December 31st 2013. The recorded variables were: sex, weight, age, indication (psoriasis or psoriatic arthritis), discontinuation reason and pharmacy dispensation records. Costs were based on the average wholesale price, estimating annual cost according to the first treatment received. Persistence rates were reckoned taking into account the current total days of therapy comparing posology with pharmacy supplied dose, and were estimated using the method of Kaplan-Meier. **RESULTS:** During the study period a cohort of 112 psoriatic patients (57% men) were evaluated: 37 patients with ADA (81 kg, 51 years, 27; mean weight, mean age, and prevalence of psoriatic arthritis respectively), 34 with ETN (82 kg, 52 years, 25%) and 41 with UST (76 kg, 43 years, 19%). The persistence rate at 2 years was, 48%, 62% and 81% and the cost per persistence at 2 years was 52.961 €, 40.160 €, and 30.657 € (for ADA, ETN and UST respectively). **CONCLUSIONS:** UST showed better overall drug survival compared to ETN and ADA. UST has been the most efficient alternative for the treatment of naïve patients and has shown the least budget-impact per persistent-patient at 2 years analysis.

PSS38

MEDICATION ADHERENCE AND DISCONTINUATION PREDICTED BY DISEASE DURATION IN GLAUCOMA PATIENTS: FINDINGS FROM A CROSS-SECTIONAL STUDY IN KOREA

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OBJECTIVES: Although several studies reported patients with chronic disease were found to have lower medication adherence and higher discontinuation rates as disease duration increased, it is still not evident in glaucoma patients. With this perspective, this study was designed to assess the association of disease duration with medication adherence and discontinuation in glaucoma patients in Korea. **METHODS:** It was a cross-sectional, multi-centered and observational study where glaucoma outpatients with less than two years of drug use were recruited at 15 eye clinics from March to November 2013. All patients completed a self-administered questionnaire asking about their daily use of glaucoma medications to estimate adherence and discontinuation. Medication adherence and discontinuation were defined as patients administering the drug for ≥80% of prescribed days and if patients stopped taking medication for 7 consecutive days respectively. **RESULTS:** A total of 1,050 glaucoma patients were enrolled in the study. Of the total, 14.4% showed to be non-adherent to their glaucoma therapy and 7.5% had the experience of medication discontinuation. All patients were categorized into 3 groups according to disease duration: group A ≤ 1 year (n=600,57.1%), B > 1 year and ≤2 years (n=415,39.5%), and C > 2 years (n=35,3. 3%). The patients of group A with the disease duration ≤ 1 year were likely to be non-adherent to glaucoma therapy compared to those with longer disease duration. (A: 84.9% vs. B: 86% vs. C: 100%, *p*=. 045) Highest discontinuation rate was found in group B with the disease duration bewteen 1 and 2 years. (A: 6.7% vs. B: 8.9% vs. C: 5.7%, P=. 380) **CONCLUSIONS:** The study results highlight more attention should be paid to the patients who newly started glaucoma therapy because in the patients with less than 2 years of disease duration the adherence was low and the discontinuation rate was high.

PSS39

HEALTH STATE UTILITIES FOR PRESSURE ULCERS – A COMPARISON OF CONDITION-SPECIFIC AND GENERIC MEASURES AND TIME-TRADE-OFF (TTO)

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OBJECTIVES: To compare a newly developed condition-specific utility index (CSUI), the Pressure Ulcer Quality of Life Utility Index (PUQoL-UI) with generic and directly elicited TTO values. **METHODS:** The PUQoL-UI was completed by a group of patients (n=100) in England with pressure ulcers (PUs) along with the EQ-5D and own health TTO. The discriminatory power of the utility measures was assessed across PU grade and health and PU severity ratings. Multivariate regression was conducted to explore determinants of utility values. **RESULTS:** The mean sample age was 77.2 years (range 22.7-101.7), 49% were female and 50% wheelchair users. Mean (SDs) utility for superficial PUs (grades 1-2) were 0.72 (0.17), 0.70 (0.35) and 0.24 (0.16) and for severe PUs (grades 3-4) 0.67 (0.17), 0.65 (0.35) and 0.15 (0.38) for the PUQoL-UI, TTO and EQ-5D, respectively. Mean (SDs) utility by self-reported PU severity was: [Mild] 0.78 (0.16), 0.66 (0.35), 0.29 (0.36); [Moderate] 0.72 (0.17), 0.63 (0.38), 0.25 (0.34); [Severe] 0.58 (0.17), 0.70 (0.33), 0.04 (0.40) for the PUQoL-UI, TTO and EQ-5D, respectively. Regression analyses indicated both EQ-5D and PUQoL-UI values were explained by perceived severity and general health ratings but not demographics or PU grade. Duration and body part affected were additional significant explanatory factors of the EQ-5D while wheelchair use approached significance. **CONCLUSIONS:** Values were much lower for the EQ-5D than the other assessments which may be partly explained by the range in EQ-5D and partly due to background mobility issues being captured. The PUQoL-UI appears to have good discriminatory power and is recommended for use in trials of PU interventions. The utilities presented here will be useful for decision-analytic models that incorporate PU impact. Probabilistic sensitivity analyses including the PUQoL-UI will likely generate lower levels of uncertainty than the EQ-5D due to the smaller SDs for health states.

PSS40

ESTIMATING UTILITY DATA FOR PATIENT SYMPTOM SEVERITY IN CHRONIC SPONTANEOUS URTICARIA

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OBJECTIVES: To obtain utility estimates suitable for use in economic models for chronic spontaneous (idiopathic) urticaria (CSU). **METHODS:** Patient-level data from three randomised clinical trials: ASTERIA I, ASTERIA II, and GLACIAL were analysed. Health states were derived from Urticaria Activity Score (UAS7), a patient-completed diary of signs and symptoms which calculates an average daily score over 7 days. Higher score means more severe symptoms. UAS7 scores for the health states were: Urticaria-free: 0; Well-controlled urticaria: 1-6; Mild urticaria: 7-15; Moderate urticaria: 16-27; Severe urticaria: 28-42. Mean EQ-5D utilities were calculated for each health state. Individual trial analyses showed inconsistent utilities across the UAS7 health states due to small subsample sizes. A mixed model was used to predict EQ-5D according to UAS7 health states in a pooled dataset containing all treatment arms and time-points from the three trials. The predictor variable was UAS7 health state and the dependent variable was EQ-5D utility. Fixed/random effects for trial and patient were included and the following covariates: UAS7 health state at baseline (Moderate or Severe), presence of angioedema at baseline and during follow-up, duration of CSU, number of previous CSU medications, and gender of the patient. A parsimonious model was selected using the approach of backwards elimination; UAS7 health state was forced into the model. The validity of pooling trials was considered through visual comparisons and interaction terms. **RESULTS:** There was a consistent improvement in EQ-5D utilities as severity of urticaria improved. Mean utilities at Week 12 ranged from 0.712 in patients with severe urticaria to 0.897 in patients who were urticaria-free. Sensitivity analysis confirmed the robustness of results. **CONCLUSIONS:** The results suggest that EQ-5D utility score increased with decreasing severity of urticaria. EQ-5D utility scores allow the comparison of HRQoL across diseases by calculating QALYs in economic models.

PSS41

HEALTH RELATED QUALITY OF LIFE IN PATIENTS WITH ACTINIC KERATOSIS - RESULTS FROM PATIENTS TREATED IN DERMATOLOGY SPECIALIST CARE IN DENMARK

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OBJECTIVES: Actinic keratosis (AK) is a common skin condition associated with cumulative sun exposure that may progress to non-melanoma skin cancer. The disease can potentially influence Health Related Quality of Life (HRQoL), but studies of HRQoL in patients with AK are limited. The objective was to analyze HRQoL in patients with AK using generic and disease-specific HRQoL instruments and to analyze the relationship between instruments. **METHODS:** AK patients who visited dermatological clinics in Denmark were included in an observational, cross-sectional, study in a multi-center setting. Dermatologists assessed AK severity and patients completed: Actinic Keratosis Quality of Life Questionnaire (AKQoL), Dermatology Life Quality Index (DLQI), EQ-5D (5L), and EuroQoL Visual Analogue Scale (EQ-VAS). **RESULTS:** A total of 312 patients from 10 clinics were included in the analyses. In general, patients with AK reported impaired HRQoL. The mean values (possible range) were: AKQoL 6.7 (0-27), DLQI 2 (0-30), EQ-5D-5L 0.88 (0-1), and EQ-VAS 79 (0-100). HRQoL was least affected in patients with mild actinic disease, whereas patients with severe actinic damage suffered from further impaired HRQoL (mean AKQoL 10.1 and DLQI 4.6). The correlation between DLQI and AKQoL was moderate (0.52), whereas the correlations between DLQI and EQ-5D (-0.36) and between AKQoL and EQ-5D (-0.10) were weak. **CONCLUSIONS:** All patients with AK had impaired HRQoL. Patients with severe actinic damage were considerably more affected than those with mild disease. Correlations between instruments demonstrate that they are complementary as they measure different aspects of HRQoL and are used for different purposes. EQ-5D is essential for economic evaluations, the DLQI is responsive to changes in relation to treatment and AKQoL captures important aspects related to sun damaged skin.

PSS42

CATEGORICAL HEALTH STATES IN CHRONIC SPONTANEOUS URTICARIA (CSU) BASED ON THE WEEKLY URTICARIA ACTIVITY SCORE (UAS7): ARE THEY DISTINCT, DISCRIMINATIVE, AND REPRODUCIBLE?

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OBJECTIVES: Specific ranges of scores reflecting patient severity or changes in severity have not been established for average daily urticaria activity summed over 7 days (UAS7; range=0-42), a common measure for assessing CSU disease activity. This study evaluates whether five non-overlapping health states derived from the continuous UAS7 score can discriminate between patients with different severities of urticaria and are reproducible across multiple studies. **METHODS:** Data come from three randomised, double-blind, placebo-controlled Phase III clinical trials evaluating the effect of omalizumab on symptoms of patients with refractory CSU. Five CSU health states were defined: Urticaria-Free (UAS7=0); Well-Controlled Urticaria (UAS7=1-6); Mild Urticaria (UAS7=7-15); Moderate Urticaria (UAS7=16-27); Severe Urticaria (UAS7=28-42). Comparison variables included the Dermatology Life Quality Index (DLQI), a 10-item dermatologic QoL instrument (range=0-30; higher scores=greater QoL impairment); patient diary questions asking about sleep and activity interference; presence of angioedema; and number of diphenhydramine 25mg pills taken in previous 24 hours. Analyses established whether different UAS7 health states showed different values on comparison variables. Analyses were replicated across the trials at baseline and weeks 12,24, and 40 (ASTERIA I and GLACIAL) and baseline and weeks 12 and 28 (ASTERIA II). **RESULTS:** Mean values for comparison variables were lowest (zero or very close to zero) for patients who were Urticaria-Free and highest for those with Severe Urticaria. For Well-Controlled and Mild Urticaria comparison variable values increased. Larger increases in values occurred for Moderate and Severe Urticaria. Changes in categorical health state severity were highly related to categorical changes in DLQI ($p<0.001$ for all trials and time points). **CONCLUSIONS:** Categorical UAS7 health states show meaningful differences in mean values on comparison variables and are highly related to established levels of effect on dermatological QoL. Categorical UAS7 health states could be informative about subgroups for economic models and useful for clinical practice.

PSS43

THE BURDEN OF PRIMARY HYPERHIDROSIS ON THE PATIENT: EQ-5D-5L UTILITIES, WILLINGNESS TO PAY AND DAILY TIME SPENT IN MANAGING THE CONDITION

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OBJECTIVES: The objective of this study was to estimate the burden associated with primary hyperhidrosis by assessing patient's health utilities, willingness to pay (WTP) for a complete cure and daily time spent in managing the condition. **METHODS:** The data used in this study were collected under a longitudinal multi-stage research undertaken to develop and validate a new HRQoL instrument from patients with hyperhidrosis recruited through online social networking communities (Hyperhidrosis support group UK and International hyperhidrosis society) from January to August 2013. Only the baseline assessment is used in this analysis. Disease severity was measured using the Hyperhidrosis Disease Severity Scale (2 = for tolerable sweating, 3 =…barely tolerable sweating, 4 = intolerable sweating). The EuroQoL 5D-5L was used for assessing health utility index. **RESULTS:** EQ-5D health utility index was lower in patients with more severe hyperhidrosis [mean utility value =. 85± 0.13 for HDSS = 2,0. 8±. 15 for HDSS = 3, and 0.69±. 2 for HDSS = 4, chi-square = 25.86, df = 2, $p < 0.001$]. Further, the health utility index was. 64 ±. 22 for WTP £0,0. 81±0.16 for £ 1 to 49,. 81±15 for £ 50 to 99,. 76±. 16 for £100 to 199,. 79± for £ 200 to 299,. 71±. 19 for £300 or more. Patients spent a mean of 50±134 minutes (HDSS = 2), 65±119 minutes (HDSS = 3) and 161±293 minutes (HDSS = 4) for daily management of hyperhidrosis. WTP showed the lowest correlation to disease severity. **CONCLUSIONS:** The current study underscores the multidimensionality of the burden of hyperhidrosis, with all aspects showing greater impairment with greater disease severity. Health utility and daily time spent in managing the condition offered significant discrimination of patients.

PSS44

SUBJECTIVE EXPECTATIONS REGARDING LIFE EXPECTANCY AND HEALTH-RELATED QUALITY OF LIFE IN MODERATE TO SEVERE PSORIASIS PATIENTS

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OBJECTIVES: To assess psoriasis patients' subjective expectations regarding their future health-related quality of life (HRQOL) and life-expectancy, and to explore variables associated with under- or overestimating behaviour. **METHODS:** A cross-sectional questionnaire survey of adult moderate to severe psoriasis patients was carried out. Patients were asked to indicate the age they expect themselves to live. HRQOL expectations were measured by the EQ-5D descriptive system for 6 months ahead and for future ages of 60,70,80 and 90, respectively. Current health state was evaluated with EQ-5D and visual analogue scale (EQ VAS), Dermatology Life Quality Index (DLQI) and Psoriasis Area and Severity Index (PASI). **RESULTS:** Overall 167 patients (71% males) were included in the analysis with mean age of 50.38±12.35 years, mean EQ-5D, EQ VAS, DLQI and PASI scores were 0.71±0.30,65.3±21.08,5. 89±7.10 and 7.82±10.13, respectively. Currently 56% of the patients were on biological therapy. Patients expected 0.1±0.23 mean improvement in EQ-5D scores within 6 months ($p<0.001$); inverse or palmoplantar psoriasis, and using only topical treatment or initiation of the first biological at the time of the survey were likely associated with higher expectations. Males overestimated their life-expectancy by 2.94±11.86 years whereas females underestimated by 5.23±9.34 years ($p<0.001$) compared to the gender- and age-matched statistical life-expectancy. Expected mean EQ-5D scores for ages from 60 to 90 were: 0.56±0.48,0. 38±0.50,0. 15±0.55, and -0.17±0.54 ($p<0.001$), respectively that are lower than the general population norms in Hungary. Both for 6 months ahead and older ages, expected EQ-5D correlated moderately with current EQ-5D and EQ VAS and only weakly with DLQI and PASI ($p<0.05$). **CONCLUSIONS:** Patients expected considerable improvement in their HRQOL for the near future and large-scale deterioration for older ages. Exploring unrealistic expectations might help to prevent dissatisfaction with treatment benefits and to improve compliance.

PSS45

THE DECISION MAKING PROCESS IN RECEIVING BONE CONDUCTION IMPLANTS (BCI) FOR SINGLE SIDED DEAFNESS

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OBJECTIVES: The main objective of this study was to evaluate the process in which patients with single sided deafness proceed to receive bone conduction implants. Factors contributing to decisions for or against implantation were also compiled. **METHODS:** Using a comprehensive search strategy, several online databases were searched to identify studies published since 2002. Research involving adults and children with single sided deafness (SSD); and reporting on patient preference for receiving BCIs were included. Screening of titles, and data extraction and quality assessment of full papers were undertaken by one reviewer with any uncertainties resolved by consultation with a second reviewer. **RESULTS:** 16 studies were identified covering a total of 914 individuals diagnosed with SSD. All patients who trialled a CROS device preferred to receive a BCI. Acceptance of new generation CROS devices is suggested to be better but still low. Following a BCI Headband trial 19% to 77% of patients across studies (mean 51%) proceeded to receive a BCI. When reported, the most common reason for rejecting implantation was insufficient benefit with the Headband in speech in noise or insufficient/no relief from tinnitus. Studies assessing factors in decision making found that age, gender, aetiology, duration of hearing loss or the presence of contralateral hearing loss did not differ between individuals who decide for or against implantation. One study so far suggests the role of transcranial attenuation at 2 kHz and tinnitus loudness to play a role in decision making. **CONCLUSIONS:** When given the option to trial traditional treatments and BCI simulators/Headbands many patients with SSD reject BCIs. This research highlights the importance of providing such trials before implantation. It is still unknown which aspects play a role in decision making and identifying better candidates.

PSS46

THE BURDEN OF CHRONIC URTICARIA IN EUROPE: A SYSTEMATIC LITERATURE REVIEW

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OBJECTIVES: To synthesize and analyze the available information on the burden of chronic urticaria (CU) [Patients' Reported Outcomes (PROs): Health related quality of life (HRQoL), adherence, satisfaction, preferences, use of medical resources and costs] in Europe. **METHODS:** A systematic review on PROs and costs of CU was performed. International (Pub Med, WOK, Scopus, Cochrane Library) and national (CSIC-IME, IBECS, MEDES) databases were consulted. Original articles, narrative/systematic reviews of studies developed in Europe, until December 2013 were retrieved. Editorials, letters/commentaries, and efficacy or economic evaluations of specific drugs were excluded. Costs were updated to €, 2013. **RESULTS:** 9 studies assessed HRQoL (3, Germany; 1, France, Greece, Italy, Spain, UK, Germany/France, respectively) and 1 satisfaction with treatments (Germany/France). No studies on adherence or preferences for treatments were identified. The CU-Q_2oL instrument, (0-100, higher value, worse HRQoL), was the most frequently used (n=4). Scores ranged from 18.4